

## **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing Of Claims:**

1-5. (Canceled)

6. (New) A method for padding segments for transmitting data on a bus system, the segments having a preset total number of binary information pieces, comprising:

transmitting the data in the segments; and

in the event of transmission of data including less binary information than a predetermined total number of the segments, padding the missing binary information of the data to the total number of the segments by a filling pattern of a corresponding number of binary information pieces, wherein the filling pattern includes a number of binary information pieces that corresponds to the total number of the segments and is first written into the segment, and wherein the binary information of the data is subsequently written into the same segment, the particular binary information of the filling pattern being overwritten by the binary information of the data.

7. (New) The method as recited in Claim 6, wherein:  
the binary information pieces include bytes.

8. (New) The method as recited in Claim 6, wherein the binary information of the filling pattern and the binary information of the data are written in a buffer memory into the segment, and the segment is transmitted from the buffer memory to the bus system.

9. (New) The method as recited in Claim 6, wherein the bus system is a time-controlled bus system, and the segments correspond to time slots on the bus system, the data being transmitted in the corresponding time slots.

10. (New) A device for padding segments for transmitting data on a bus system, the segments having a predetermined total number of binary information pieces, comprising:
- a first arrangement for transmitting the data in the segments; and
  - a second arrangement for, in the event of transmission of data including less binary information than the predetermined total number of the segment, padding the missing binary information of the data to the total number of the segment through a filling pattern of a corresponding number of binary information pieces, wherein the second means first writes the filling pattern, whose number of binary information pieces corresponds to the total number of the segment, into the segment and subsequently writes the binary information of the data into the same segment, the particular binary information of the filling pattern being overwritten by the binary information of the data.
11. (New) The device as recited in Claim 10, wherein:
- the binary information pieces include bytes.
12. (New) A bus system, comprising:
- a device for padding segments for transmitting data on the bus system, the segments having a predetermined total number of binary information pieces, the device including:
    - a first arrangement for transmitting the data in the segments; and
    - a second arrangement for, in the event of transmission of data including less binary information than the predetermined total number of the segment, padding the missing binary information of the data to the total number of the segment through a filling pattern of a corresponding number of binary information pieces, wherein the second means first writes the filling pattern, whose number of binary information pieces corresponds to the total number of the segment, into the segment and subsequently writes the binary information of the data into the same segment, the particular binary information of the filling pattern being overwritten by the binary information of the data.
13. (New) The bus system as recited in Claim 12, wherein:
- the binary information pieces include bytes.